

Section 1: IDENTIFICATION

Product Name: SmartHandSanitizer Liquid
Product ID: SS-STZR01
Product Use: Hand Sanitizer.
Restrictions on Use: Not available.
Manufacturer/Supplier: Smart Solutions Inc.
 12 Corporate Plaza Drive Suite 150
 Newport Beach, Ca 92660
Phone Number: +1 (949) 675-3200
Emergency Phone: Chemtrec (US & Canada) 1-800-424-9300
 Chemtrec (outside the US & Canada) 1-703-537-3887
Date of Preparation of SDS: March 17, 2020

Section 2: HAZARD(S) IDENTIFICATION
GHS INFORMATION

Classification: Flammable Liquids, Category 2
 Eye Irritation, Category 2A
 Specific Target Organ Toxicity (Single Exposure), Category 3 - Narcotic Effects

LABEL ELEMENTS
Hazard
Pictogram(s):

Signal Word: Danger

Hazard Statements: Highly flammable liquid and vapor.
 Causes serious eye irritation.
 May cause drowsiness or dizziness.

Precautionary Statements

Prevention: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 Keep container tightly closed.
 Ground and bond container and receiving equipment.
 Use explosion-proof electrical, ventilating, and lighting equipment.
 Use non-sparking tools.
 Take action to prevent static discharges.
 Avoid breathing mist, vapours, or spray.
 Wash thoroughly after handling.
 Use only outdoors or in a well-ventilated area.
 Wear protective gloves, protective clothing and eye protection.

Response: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
 IF INHALED: Remove person to fresh air and keep comfortable for breathing.



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IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a POISON CENTER or doctor if you feel unwell.
 If eye irritation persists: Get medical attention.
 In case of fire: Use dry chemical, CO₂, water spray or alcohol-resistant foam to extinguish.

Storage: Store in a well-ventilated place. Keep container tightly closed. Keep cool. Store locked up.

Disposal: Dispose of contents/container in accordance with applicable regional, national and local laws and regulations.

Hazards Not Otherwise Classified: Not applicable.

Ingredients with Unknown Toxicity: None.

This material is considered hazardous by the Hazardous Products Regulations.

Section 3: COMPOSITION / INFORMATION ON INGREDIENTS			
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Hazardous Ingredient(s)	Common name / Synonyms	CAS No.	% wt./wt.
Ethanol	Not available.	64-17-5	70- 80
Hydrogen peroxide (H ₂ O ₂)	Hydrogen peroxide	7722-84-1	0.1-1
Non-Hazardous Ingredient(s)	Common name / Synonyms	CAS No.	% wt./wt.
Water	Not available.	7732-18-5	10- 30
1,2,3-Propanetriol	Glycerin	56-81-5	1 - 5

Actual concentration range(s) withheld as a trade secret.

Section 4: FIRST-AID MEASURES	
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Inhalation: If used as recommended, no first-aid measures are necessary. If handling large amounts of vapour is inhaled, remove person to fresh air and keep comfortable for breathing. Call a poison center or doctor if you feel unwell. If breathing or the heart stops, trained personnel should immediately begin artificial respiration (AR) or cardiopulmonary resuscitation (CPR) respectively. Get medical attention immediately.

Acute and delayed symptoms and effects: Normal use is not expected to cause any adverse effects. Excessive inhalation may cause headache, dizziness, confusion, loss of appetite and/or loss of consciousness.

Eye Contact: If in eyes: Rinse cautiously with water for at least 20 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Acute and delayed symptoms and effects: Causes serious eye irritation. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision. Ethanol may cause painful sensitization to light, chemical



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conjunctivitis and corneal damage.

Skin Contact: If used as recommended, no first-aid measures are necessary. If in contact with large amounts of product: Rinse skin with water or shower. Call a poison center or doctor if you feel unwell.

Acute and delayed symptoms and effects: No adverse effects are expected under normal conditions of use. Handling of large amounts may cause skin dryness and/or irritation.

Ingestion: If swallowed: Call a poison center or doctor if you feel unwell. If vomiting occurs naturally, have victim lean forward to reduce the risk of aspiration. Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If breathing or the heart stops, trained personnel should immediately begin artificial respiration (AR) or cardiopulmonary resuscitation (CPR) respectively. Get medical attention immediately.

Acute and delayed symptoms and effects: May cause gastrointestinal irritation. Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

General Advice: In case of accident or if you feel unwell, seek medical advice immediately (show the label or SDS where possible).

Note to Physicians: Symptoms may not appear immediately.

Section 5: FIRE-FIGHTING

MEASURES FLAMMABILITY AND EXPLOSION INFORMATION

Highly flammable liquid and vapor. Will be easily ignited by heat, sparks or flames. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks). Vapor explosion hazard indoors, outdoors or in sewers. Runoff to sewer may create fire or explosion hazard. Containers may explode when heated. Liquid is lighter than water.

If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions.

Fire involving Tanks or Car/Trailer Loads: Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Cool containers with flooding quantities of water until well after fire is out. Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank. ALWAYS stay away from tanks engulfed in fire. For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn.

Sensitivity to Mechanical Impact: This material is not sensitive to mechanical impact.

Sensitivity to Static Discharge: Take action to prevent static discharges. This material is sensitive to static discharge.

MEANS OF EXTINCTION

Suitable Extinguishing Media: Small Fire: Dry chemical, CO2, water spray or alcohol-resistant foam.



Large Fire: Water spray, fog or alcohol-resistant foam. Move containers from fire area if you can do it without risk.

Unsuitable Extinguishing Media: Do not use straight streams. CAUTION: This product has a very low flash point: Use of water spray when fighting fire may be inefficient.

Products of Combustion: Oxides of carbon. Acrolein.

Protection of Firefighters: Inhalation or contact with material may irritate or burn skin and eyes. Fire may produce irritating, corrosive and/or toxic gases. Vapors may cause dizziness or suffocation. Runoff from fire control may cause pollution. Wear positive pressure self-contained breathing apparatus (SCBA). Structural firefighters' protective clothing will only provide limited protection.

Section 6: ACCIDENTAL RELEASE MEASURES

Emergency Procedures: As an immediate precautionary measure, isolate spill or leak area for at least 50 meters (150 feet) in all directions. Keep unauthorized personnel away. Stay upwind. Keep out of low areas. Ventilate closed spaces before entering. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). All equipment used when handling the product must be grounded.

Personal Precautions: Do not touch or walk through spilled material. Use personal protection recommended in Section 8.

Environmental Precautions: Prevent entry into waterways, sewers, basements or confined areas.

Methods for Containment: Stop leak if you can do it without risk. A vapor suppressing foam may be used to reduce vapors.

Methods for Clean-Up: Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers. Use clean non-sparking tools to collect absorbed material.

Other Information: See Section 13 for disposal considerations.

Section 7: HANDLING AND STORAGE

Handling:
Do not swallow. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep container tightly closed. Ground and bond container and receiving equipment. Use non-sparking tools. Take action to prevent static discharges. Avoid breathing mist, vapours, or spray. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. See Section 8 for information on Personal Protective Equipment.

Storage:
Store in a well-ventilated place. Keep container tightly closed. Keep cool. Store locked up. Store away from incompatible materials. See Section 10 for information on Incompatible Materials. Keep out of the reach of children.

Section 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines Component

Ethanol [CAS No. 64-17-5]

ACGIH: 1000 ppm (TWA); A3 (2008)

OSHA: 1000 ppm (TWA), 1900 mg/m³ (TWA);

Hydrogen peroxide [CAS No. 7722-84-1]

ACGIH: 1 ppm (TWA); A3 (1990)

OSHA: 1 ppm (TWA), 1.4 mg/m³ (TWA);

Water [CAS No. 7732-18-5]

ACGIH: No TLV established.

OSHA: No PEL established.

Glycerin [CAS No. 56-81-5]

ACGIH: No TLV established.

OSHA: 15 mg/m³ (Total particulate) (TWA), 5 mg/m³ (Respirable fraction) (TWA);
10 mg/m³ (Total particulate) (TWA) [Vacated];

PEL: Permissible Exposure Limit

TLV: Threshold Limit Value

TWA: Time-Weighted Average

STEL: Short-Term Exposure Limit

Engineering Controls:

Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapour, gas, etc.) below recommended exposure limits. Use explosion-proof electrical, ventilating, and lighting equipment.

PERSONAL PROTECTIVE EQUIPMENT (PPE)



Eye/Face Protection:

Wear chemical safety goggles when handling large amounts of product. Ensure that eyewash stations are close to the workstation location. Use equipment for eye protection that meets the standards referenced by CSA Standard CAN/CSA-Z94.3-92 for Personal Protective Equipment.

Hand Protection:

Wear protective gloves when handling large amounts of product. Consult manufacturer specifications for further information.

Skin and Body Protection:

Wear protective clothing when handling large amounts of product. Flame resistant clothing that meets the NFPA 2112



and CAN/CGSB 155.20 standards is recommended in areas where material is stored or handled.

Respiratory Protection: Not necessary under normal conditions of use. If handling large amounts of product, if engineering controls and ventilation are not sufficient to control exposure to below the allowable limits then an appropriate NIOSH/MSHA approved air-purifying respirator that meets the requirements of CSA Standard CAN/CSA-Z94.4-11, with organic vapor cartridge, or self-contained breathing apparatus must be used. Supplied air breathing apparatus must be used when oxygen concentrations are low or if airborne concentrations exceed the limits of the air-purifying respirators.

General Hygiene Considerations: Handle according to established industrial hygiene and safety practices. Consult a competent industrial hygienist to determine hazard potential and/or the PPE manufacturers to ensure adequate protection.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Clear liquid.
Colour:	Colourless.
Odour:	Alcohol.
Odour Threshold:	Not available.
Physical State:	Liquid.
pH:	Not available.
Melting Point / Freezing Point:	Not available.
Initial Boiling Point:	78 °C (172.4 °F) (Ethanol)
Boiling Range:	Not available.
Flash Point:	12 °C (53.6 °F) (Closed Cup - Ethanol)
Evaporation Rate:	Not available.
Flammability (solid, gas):	Not applicable.
Lower Flammability Limit:	Not available.
Upper Flammability Limit:	Not available.
Vapor Pressure:	Not available.
Vapor Density:	Not available.
Relative Density:	0.850 (Water = 1)
Solubilities:	Miscible in water.
Partition Coefficient: n-Octanol/Water:	Not available.



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Auto-ignition Temperature: 400 °C (752 °F) (Ethanol)

Decomposition Temperature: Not available.

Viscosity: Not available.

Percent Volatile, wt. %: Not available.

VOC content, wt. %: Not available.

Density: Not available.

Coefficient of Water/Oil Distribution: Not available.

Section 10: STABILITY AND REACTIVITY

Reactivity: Contact with incompatible materials. Sources of ignition. Exposure to heat.

Chemical Stability: Stable under normal storage conditions.

Possibility of Hazardous Reactions: None known.

Conditions to Avoid: Contact with incompatible materials. Sources of ignition. Exposure to heat.

Incompatible Materials: Acids. Strong oxidizers.

Hazardous Decomposition Products: Not available.

Section 11: TOXICOLOGICAL INFORMATION

EFFECTS OF ACUTE EXPOSURE

Product Toxicity

Oral: Not available.

Dermal: Not available.

Inhalation: Not available.

Component Toxicity

Component	CAS No.	LD ₅₀ oral	LD ₅₀ dermal	LC ₅₀
Ethanol	64-17-5	7060 mg/kg (rat)	20000 mg/kg (rabbit)	20000 ppm (rat); 10H
Hydrogen peroxide	7722-84-1	376 mg/kg (rat)	4060 mg/kg (rat)	2000 mg/m ³ (rat); 4H
Water	7732-18-5	Not available.	Not available.	> 90000 µl/kg (rat); 4H
Glycerin	56-81-5	12600 mg/kg (rat)	> 10000 mg/kg (rabbit)	> 570 mg/m ³ (rat); 1H

Likely Routes of Exposure: Eye contact. Skin contact. Inhalation. Ingestion.

Target Organs: Eyes. Gastrointestinal tract. Respiratory system.



Symptoms (including delayed and immediate effects)

Inhalation: Normal use is not expected to cause any adverse effects. Excessive inhalation may cause headache, dizziness, confusion, loss of appetite and/or loss of consciousness.

Eye: Causes serious eye irritation. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision. Ethanol may cause painful sensitization to light, chemical conjunctivitis and corneal damage

Skin: No adverse effects are expected under normal conditions of use. Handling of large amounts may cause skin dryness and/or irritation.

Ingestion: May cause gastrointestinal irritation. Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

Skin Sensitization: Not available.

Respiratory Sensitization: Not available.

Medical Conditions Not available.

Aggravated By Exposure:

EFFECTS OF CHRONIC EXPOSURE (from short and long-term exposure)

Target Organs: Skin. Eyes. Gastrointestinal tract. Respiratory system. Blood. Cardiovascular system. Liver. Kidneys. Reproductive system. Central nervous system.

Chronic Effects: Prolonged or repeated contact may dry skin and cause irritation. High vapour concentrations, generally greater than 10% by volume, may sensitize the heart and lead to lethal cardiac arrhythmias.

Carcinogenicity: Product is not classified as a carcinogen. See Component Carcinogenicity table below for information on individual components. Animal studies with Ethanol have reported the development of tumours.

Component Carcinogenicity

Component	ACGIH	IARC	NTP	OSHA	Prop 65
Ethanol	A3	Group 1	Not listed.	OSHA Carcinogen.	Not listed.
Hydrogen peroxide	A3	Group 3	Not listed.	Not listed.	Not listed.

Mutagenicity: Laboratory experiments with Ethanol have resulted in mutagenic effects.

Reproductive Effects: Ethanol may cause reproductive effects.

Developmental Effects

Teratogenicity: Not available.

Embryotoxicity: Ethanol has been shown to produce fetotoxicity in the embryo or fetus of laboratory animals if swallowed. Prenatal exposure to ethanol by ingestion is associated with a distinct pattern of congenital malformations that have collectively been termed the "fetal alcohol syndrome".

Toxicologically Synergistic Materials: Not available.

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity: Not available.
Persistence / Degradability: Not available.
Bioaccumulation / Accumulation: Not available.
Mobility in Environment: Not available.
Other Adverse Effects: Not available.

Section 13: DISPOSAL CONSIDERATIONS

Disposal Instructions: Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.

Section 14: TRANSPORT INFORMATION

Canada Transportation of Dangerous Goods (TDG)

Proper Shipping Name: UN1987, ALCOHOLS, N.O.S., 3, PG II
Class: 3
UN Number: UN1987
Packing Group: II
Label Code:



ICAO/IATA

Proper Shipping Name: UN1987, ALCOHOLS, N.O.S., 3, PG II
Class: 3
UN Number: UN1987
Packing Group: II
Label Code:



IMDG

Proper Shipping Name: UN1987, ALCOHOLS, N.O.S., 3, PG II
Class: 3
UN Number: UN1987
Packing Group: II
Label Code:





Section 15: REGULATORY INFORMATION

Chemical Inventories

Canada (DSL)

The components of this product are in compliance with the chemical notification requirements of the NSN Regulations under CEPA, 1999.

Section 16: OTHER INFORMATION

Disclaimer:

The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. It is the user's responsibility to satisfy oneself as to the suitability and completeness of this information for their own particular use.

Date of Preparation of SDS: March 17, 2020

Version: 1.0

GHS SDS Prepared by: Smart Solutions Inc.
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